

Applicant has addressed the § 112 issues in the claims through the above amendment. If any indefiniteness remains in the claims, Applicant will make an appropriate amendment as suggested by the Examiner.

In response to the double patenting rejection, a terminal disclaimer and fee are enclosed.

In response to the prior art rejections of the claims, various amendments have been made above. It is believe that the claims distinguish the invention over the prior art. With respect to the obviousness rejections, Applicant wishes to point out that his preferred gels as described in great detail in the specification and as recited in the claims achieve either very little or no plasticizer bleed and very little or no tack. This is in contrast to the prior art which sought tack and experienced great bleed. Sieverding's gel was an adhesive which by nature is very tacky. Chen sought to reduce bleed but failed. The assignee of this application was a licensee of the Chen patents and worked unsuccessfully with the Chen gels for a long period of time in making mattress cushions. Chen's gels were weak, had great amounts of oil bleed, and were very tacky. These qualities proved to be an obstacle to constructing a high quality and high performance mattress cushion.

It was the lack of success of Chen's gel in producing a non-bleed, non-tacky mattress cushion that led the inventor to use the Septon triblock copolymers to formulate gels that are low tack or non-tack and low bleed or non-bleed (depending on the amount of plasticizer use in the gel formulation).

Further, Applicant found that his new gel had a greater tensile strength (4:1 ratio of plasticizer to A-B-A triblock copolymer in Applicant's invention has a tensile strength

of 800 to 1000 p.s.i., while Chen's preferred gel of the same formulation has a tensile strength of only 58 p.s.i.).

Applicant also found his gel had greater elongation (typical 1900% to 2100% compared to Chen's 1700%).

Applicant also discovered that his gel was useful in the range of 1.5:1 to 35:1 plasticizer to A-B-A triblock copolymer while Chen teaches only 3:1 to 16:1. Applicant believes that these superior features of his invention and the failure of others such as Chen, Sieverding and Crossland to achieve these features, shows that Applicant's invention is non-obvious.

Once Applicant achieved his invention, he proceeded to seek licensees for his gel. Chen has issued many licenses for his gel and his gel is well known in several industries. Notwithstanding Chen's prior participation in the market for licensing gels, Applicant has issued several lucrative licenses for his as-yet unpatented gels even though Chen has been holding himself out as willing to license a patented gel. Applicant's perception is that the superior performance characteristics of his gel (less tack, less plasticizer bleed and less expensive to manufacture) were appealing to his licensees.

With regard to the structural limitations found in the claims and addressing the novelty rejections, Applicant wishes to point out Applicant's A-B-A triblock copolymer has a significantly higher weight average molecular weight (as determined by gel permeation chromatography) than Chen's. Chen's copolymer has a molecular weight of about 200,000. The invented gel uses a copolymer with a weight average molecular weight of about 300,000 or more. The higher molecular weight copolymer of the

invention provides the gel with the beneficial performance attributes as mentioned above and as detailed in the specification.

One way to compare molecular weights is to compare solution viscosities of copolymers. Note that Chen's solution viscosity is about 1800 cps at 20% solids and 80% toluene at 25 degrees Celcius. In stark contrast, under these conditions Applicant's A-B-A is a solid, not a liquid with a measurable solution viscosity. This evidences the extreme difference in molecular weight between the prior art copolymer and Applicant's Applicant's preferred A-B-A triblock copolymer. In further contrast, Applicant's copolymer has a measurable solution viscosity at 10 weight percent solids in 90% toluene at 25 degrees Celsius (about 5800 cps or 3040 cps, depending on the test) and at 5% solids in 95% toluene at 25 degrees Celsius (about 90 cps).

With regard to the citation of the Pearce patent for the idea that microspheres can be added to the gel, Applicant believes this citation is not proper. The Pearce patent discloses lubricated microspheres in a flowable cushioning medium. The cushioning medium of that patent consists entirely of microspheres and lubricant in a bladder that keeps the microspheres and lubricant from escaping and making a mess. The present invention is a gel that is firm and self-cohesive at room temperature such that it needs no bladder. The microspheres in the present invention do not provide the cushioning effect (the gel and the gel structure do that), but serve to lighten the produce by reducing the amount of gel used to make it. In the Pearce patent, the microspheres are the cushioning medium, made more effective by the lubricant on the microspheres.

As amended, claim 74 now recites that the elastomer has a weight average of about 300,000 or more when determined by gel permeation chromatography. No prior art

document discloses or suggests use of such a high molecular weight elastomer in a gel, and the use of a high molecular weight elastomer provides Applicant's gel with superior characteristics compared to prior art gels.

As amended, claim 111 now recites an elastomer with a weight average molecular weight of about 300,000 or more and an elastomer having specific solubility in toluene. These limitations are not disclosed or suggested by the prior art.

Newly added claims 136-142 recite an elastomeric material that uses an elastomer with a weight average molecular weight of about 300,000 or more. This is not found in the prior art.

Further, the limitations concerning solution viscosity and side chains are also not found the prior art. Applicant believes that the carbon side chains found on his A-B-A triblock copolymer reduce plasticizer bleed from his gel.

Several claims also recite the novel solution viscosity of the copolymer of the invention. Other limitations in the claims are also not found in the prior art.

Applicant believes the above claims are allowable over the prior art and reconsideration is requested.

Respectfully submitted this 1st day of March, 1999.



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